

Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

1. (Previously presented) A method for fabricating ceramic nanocomposite powder, said method comprising:

- (a) dispersing carbon nanotubes in a dispersion medium;
- (b) sonicating the dispersion;
- (c) dispersing a water-soluble salt in the sonicated dispersion of (b), wherein said water-soluble salt, mixed with the carbon nanotubes, includes metal-based salts capable of being formed into a ceramic matrix post calcination;

- (d) sonicating the dispersion of (c) for 2 to 10 hours, the dispersion consisting essentially of the carbon nanotubes, the water-soluble salt, and the dispersion medium, wherein the dispersion medium is selected from the group consisting of water, ethanol, nitric acid solution, toluene, N,N-dimethylformamide, dichlorocarbene, and thionyl chloride; and

- (e) drying and calcinating the sonicated dispersion of (d);

thereby fabricating ceramic nanocomposite powder, wherein said carbon nanotubes are homogeneously dispersed in said ceramic matrix, and wherein chemical bonds are formed between the carbon nanotubes and the ceramic matrix.

2. (Original) The method according to claim 1, wherein said dispersion medium in (a) is selected from the group consisting of water, ethanol, nitric acid solution, toluene, N,N-dimethylformamide, dichlorocarbene and thionyl chloride.

3. (Canceled)

4. (Original) The method according to claim 1, wherein said ceramic matrix is selected from the group consisting of aluminum oxides, copper oxides, cobalt oxides, nickel oxides, zinc oxides, tungsten oxides and silicon oxides.

5. (Canceled)

6. (Original) The method according to claim 1, wherein said drying is carried out at 80-100°C.

7. (Previously presented) The method according to claim 1, wherein the calcination is carried out in air at 300-350°C.

8. (Previously presented) The method according to claim 1, wherein the calcination is carried out under high vacuum at a temperature of 400-1,700°C.

9. (Previously presented) The method according to claim 6, wherein when said ceramic matrix requires a calcination temperature of 400°C or lower, said ceramic matrix is further dried at 300-350°C.

10. (New) A method for fabricating ceramic nanocomposite powder, said method comprising:

- (a) dispersing carbon nanotubes in a dispersion medium;
- (b) sonicating the dispersion;
- (c) dispersing a water-soluble salt in the sonicated dispersion of (b), wherein said water-soluble salt, mixed with the carbon nanotubes, includes metal-based salts capable of being formed into a ceramic matrix post calcination;

- (d) sonicating the dispersion of (c) for 2 to 10 hours to functionalize the carbon nanotubes, the dispersion consisting essentially of the carbon nanotubes, the water-soluble salt, and the dispersion medium, wherein the dispersion medium is selected from the group consisting of water, ethanol, nitric acid solution, toluene, N,N-dimethylformamide, dichlorocarbene, and thionyl chloride; and

(e) drying and calcinating the sonicated dispersion of (d);
thereby fabricating ceramic nanocomposite powder, wherein said carbon nanotubes are homogeneously dispersed in said ceramic matrix, and wherein chemical bonds are formed between the carbon nanotubes and the ceramic matrix.

11. (New) A method for fabricating ceramic nanocomposite powder, said method comprising:

- (a) dispersing carbon nanotubes in a dispersion medium;
 - (b) sonicating the dispersion;
 - (c) dispersing a water-soluble salt in the sonicated dispersion of (b), wherein said water-soluble salt, mixed with the carbon nanotubes, consists of metal-based salts capable of being formed into a ceramic matrix post calcination;
 - (d) sonicating the dispersion of (c) for 2 to 10 hours, the dispersion consisting of the carbon nanotubes, the water-soluble salt, and the dispersion medium, wherein the dispersion medium is selected from the group consisting of water, ethanol, nitric acid solution, toluene, N,N-dimethylformamide, dichlorocarbene, and thionyl chloride; and
 - (e) drying and calcinating the sonicated dispersion of (d);
- thereby fabricating ceramic nanocomposite powder, wherein said carbon nanotubes are homogeneously dispersed in said ceramic matrix, and wherein chemical bonds are formed between the carbon nanotubes and the ceramic matrix.